$O^- R^1 O^-$	CH_{3} $(CH_{2})_{4}$ $N-CH_{3}$ CH_{2} CH_{2} CH_{3} CH_{2} CH_{2} CH_{3} CH_{2} CH_{3} CH_{3} CH_{2} CH_{3} CH_{3} CH_{2} CH_{3} CH	
O = P - C - P = O	O = P - C - P = O	
$\overset{1}{\mathrm{O}}^{-}\overset{1}{\mathrm{R}^{2}}\overset{1}{\mathrm{O}}^{-}$	O- OH O-	
Bisphosphonate	Ibandronate	NILI
O ⁻ CH ₃ O ⁻	O Cl O O O O O O O O O O O O O O O O O O	$\begin{array}{c} NH_2 \\ CH_2 \\ O^- CH_2 O^- \\ O = P - C - P = O \\ O^- OH O^- \end{array}$
NH ₂ CH ₂ CH ₂ O	$O^{-} CH_{2}O^{-}$ $O = P - C - P = O$ $O = H O$	O-S O-O-P-O-P-O-H O-H O-
Alendronate	Risedronate	Tiludronate

FIGURE 1

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$$O = P - O - P = O$$
 $O = O - O - O$

Pyrophosphate

FIGURE 2

$$O^{-}$$
 O^{-} O^{-} O^{-} O^{-} O^{-} O^{-} O^{-} O^{-} O^{-} O^{-}

Thiobisphosphonate

$$O^{-}$$
 O^{-} O^{-}

Nitrobisphosphonate

FIGURE 3